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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,247	03/20/2007	Etienne Duguet	1032013-000137	6398

23911 7590 04/13/2010

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EXAMINER	
MICALI, JOSEPH	
ART UNIT	PAPER NUMBER
1793	
MAIL DATE	DELIVERY MODE
04/13/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,247	DUGUET ET AL.	
	Examiner	Art Unit	
	Joseph V. Micali	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) *8-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/25/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

Claims 1-7 are pending and presented for examination on the merits, as claims 8-23 have been withdrawn as per applicant's election in response to the Requirement for Restriction of February 2nd, 2010.

Election/Restrictions

1. Claims 8-26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on February 26th, 2010.

2. Applicant's election with traverse of the Group I invention in the reply filed on February 26th, 2010 is acknowledged. The traversal is on the ground(s) that the groups, or inventions, can be examined together. This is not found persuasive because, as the examiner has shown, the claimed product can be made by materially different processes, and thus, a search for the product would not encompass the claimed process, and hence, a search burden has been established.

The requirement is still deemed proper and is therefore made FINAL.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,528,167 by O'Gara.

With respect to claim 1, O'Gara is drawn to porous hybrid particles with organic groups removed from the surface (**title**). Specifically, O'Gara discloses mesoscopic particles (< 1 micron) comprised of silica (**column 3, lines 35-55**), wherein the surface may be divided into different zones containing different, exclusive functionalized groups (**column 3, line 63, and column 4, line 60 - column 5, line 50**). For example, in the cited sections, O'Gara discloses a maximum of 50% of the silica surface being able to react with the trimethylsilyl compound for further surface modification (no longer any OH groups in this section due to chemical conversion), thus leaving the rest of the silica (i.e., unmodified section) with a surface group of OH. Furthermore, with respect to the zone limitations, the instant claim language does not recite continuous zones, only that the surface is divided up into two zones, i.e., a zone with group F1 only and a zone with group F2 only. The disclosure of O'Gara reads on such claim language.

With respect to claims 4-5 and 7, O'Gara discloses the inorganic material being the mineral oxide of silica, in addition to alumina and titanium oxides (**column 3, lines 35-55**).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,528,167 by O'Gara.

With respect to claims 2-3, O'Gara is drawn to porous hybrid particles with organic groups removed from the surface (**title**). Specifically, O'Gara discloses mesoscopic particles comprised of silica (**column 3, lines 35-55**), wherein the surface may be divided into different zones containing different, exclusive functionalized groups (**column 3, line 63, and column 4, line 60 - column 5, line 50**). For example, in the cited

sections, O'Gara discloses a maximum of 50% of the silica surface being able to react with the trimethylsilyl compound for further surface modification (no longer any OH groups in this section due to chemical conversion), thus leaving the rest of the silica (i.e., unmodified section) with a surface group of OH.

Thus, the disclosure of O'Gara overlaps the claimed range of at least 5% in claim 2 and at least 10% in claim 3, as O'Gara discloses a range essentially of 0-50% (**column 3, line 60**). MPEP 2144.05 [R-5] states, "In the case where the claimed ranges 'overlap or lie inside ranges disclosed by the prior art' a *prima facie* case of obviousness exists."

10. Claims 1 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Pub. No. 2003/0031438 by Kambe et al.

With respect to claims 1 and 6, Kambe discloses several types of nanoscale particles of inorganic material, including a metal stable in aqueous medium, such as silver (**paragraphs 0113 and 0115**). Furthermore, Kambe discloses that such particles can be surface-modified/functionalized (**paragraphs 0079 and 0092**) and suggests the possibility of multiple, different linker molecules on the particles for the situation of a plurality of different polymers used (**paragraph 0078**). Kambe also discloses selecting a specific portion of the inorganic particle surface for such linker molecules, i.e. a zone (**paragraph 0078**).

As such, the instant application recites two different groups on the surface of the nanoscale particle, while Kambe discloses one or more groups on the surface of the nanoscale particle. If suggestion or motivation for such an instance of obviousness is required, one having ordinary skill in the art at the time the invention was made would have selected modifying the particle surface of Kambe with two different groups for the

purpose of producing a particle that can react with multiple sources (**Kambe, paragraph 0078**).

Conclusion

11. Claims 1-7 are rejected.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph V. Micali whose telephone number is (571) 270-5906. The examiner can normally be reached on Monday through Friday, 7:30am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry A. Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph V Micali/
Examiner, Art Unit 1793

/J.A. LORENGO/
Supervisory Patent Examiner, Art Unit 1793